In The Claims

Please amend claim 6 as follows.

1. (original) A method to control a clutch to connect an engine to a powertrain of a hybrid electric vehicle (HEV), comprising the steps of:

determining an engine run command;

determining a filtered speed error of the engine and a starter/motor; and

generating a clutch position command.

2. (original) The method of claim 1, wherein the HEV is a parallel HEV.

3. (original) The method of claim 1, wherein the step of determining an engine run command comprises the steps of:

determining whether the clutch is engaged;

determining whether the engine is at least spinning at a predetermined idle speed;

commanding a fuel request to the engine when the clutch is engaged and the engine is spinning at least at the predetermined idle speed.

4. (original) The method of claim 3 wherein the predetermined idle speed is 750 RPM.

5. (original) The method of claim 1, wherein the step of determining a filtered speed error comprises the steps of:

   determining a speed error;

   determining a scaled speed error; and

   inputting the scaled speed error to a digital lowpass filter.

6. (currently amended) The method of claim 5, wherein determining speed error comprises the steps of:

   sensing ~~starter/alternator~~ <u>starter/motor</u> speed and engine speed; and

   determining the difference of the starter/alternator speed and the engine speed.

7. (original) The method of claim 5, wherein the step of determining scaled speed error comprises the steps of:

   determining a speed gain; and

   multiplying the speed gain and the speed error.

8.   (original) The method of claim 5, wherein the step of determining filtered speed error comprises the steps of:

multiplying the scaled speed error by a predetermined time constant (TC) and a current determination time step (K);

multiplying (1-TC) by the filtered speed error and (k-1); and

summing the step multiplying the scaled speed error by TC and a current determination time step (K) and the step of multiplying (1-TC) by the filtered speed error and (k-1).

9.   (original) The method of claim 8, wherein the predetermined time constant is 0.03.

10.   (original) The method of claim 1, wherein the step of generating a clutch position command comprises the steps of:

sensing actual clutch position, whether an accelerator is applied, and whether a mechanical braking device is applied;

inputting actual clutch position to a vehicle system controller;

determining whether engine speed is greater than a predetermined idle speed;

commanding engagement of the clutch when the braking device is applied and the engine speed is greater than a predetermined idle speed; and

commanding engagement of the clutch when both the braking device and the accelerator are applied and the engine speed is greater than a predetermined idle speed.

11. (original) The method of claim 10, wherein the predetermined idle speed is 750 RPM.

12. - 15. (cancelled)